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# Claims

[c1] A printed circuit board adapted to mount electrical circuitry of the type having at least one base layer formed with first and second opposing surfaces, the invention comprising:

a first through passageway having a first passageway diameter extending through the base layer from the first surface to a desired depth from the first surface between the first and second surfaces;

a first bore hole having a first bore diameter and concentric with the first through passageway formed between the first surface and a desired first depth in the base layer between the first and second surfaces; the first bore diameter being smaller than the first passageway diameter;

a second bore hole having a second bore diameter and concentric with the first through passageway formed between the second surface and a desired second depth in the base layer between the first and second surfaces; the second bore diameter being greater than the first passageway diameter;

the first through passageway, first bore hole, and second bore hole comprising a desired open struc-

ture communicating between the first surface and the opposing second surface;
the open structure being plated with a desired conductive material; and,
a second through passageway concentric with the first through passageway extending through the open structure formed in the base layer from the first surface to the second surface; the second through passageway having a second passageway diameter at least as large as the first passageway diameter; the second through passageway being formed subsequent to plating of the open structure.

[c2] The invention of claim 1 further including a first connector pin compatible with at least a first portion of the open structure being inserted into the open structure from the first surface; and, a second connector pin compatible with at least a second portion of the open structure being inserted into the open structure from the second surface.

[c3] The invention of claim 1 wherein the printed circuit board includes multiple layers.

[c4] The invention of claim 1 wherein the holes formed in the printed circuit board form cylindrical voids.

[c5] The invention of claim 1 wherein a layer of electroless metal is deposited onto walls of the open structure; and, a further comparable metallic layer is electroplated over the electroless metal deposition.

[c6] The invention of claim 5 wherein the metal is copper.

[c7] A method for adapting a printed circuit board of the type adapted to mount electrical circuitry of the type having at least one base layer formed with first and second opposing surfaces to provide a mechanical attachment to both sides a single through hole without electrical continuity, the invention comprising:

forming a first through passageway having a first passageway diameter extending through the base layer from the first surface to the second surface;

forming a first bore hole having a first bore diameter and concentric with the first through passageway and between the first surface and a desired first depth in the base layer between the first and second surfaces; the first bore diameter being greater than the first passageway diameter;

forming a second bore hole having a second bore diameter concentric with the first through passageway between the second surface and a desired second depth in the base layer between the first and second surfaces; the second bore diameter being greater

than the first passageway diameter;
the first through passageway, first bore hole, and second bore hole comprising a desired open structure communicating between the first surface and the opposing second surface;
plating the open structure with a desired conductive material; and,
forming a second through passageway concentric with the first through passageway extending through the open structure in the base layer from the first surface to the second surface; the second through passageway having a second passageway diameter at least as large as the first passageway diameter; the second through passageway being formed after the open structure is electroplated.

[c8] The method of claim 7 further including the step of inserting a first connector pin compatible with at least a first portion of the open structure into the open structure from the first surface; inserting a second connector pin compatible with at least a second portion of the open structure into the open structure from the second surface.

[c9] The method of claim 7 wherein the printed circuit board includes multiple layers.

[c10] The method of claim 7 wherein the holes formed in the printed circuit board form cylindrical voids.

[c11] The method of claim 7 wherein a layer of electroless metal is deposited onto walls of the open structure; and, a further comparable metallic layer is electroplated over the electroless metal deposition.

[c12] The method of claim 11 wherein the metal is copper.

[c13] A method for adapting a printed circuit board of the type adapted to mount electrical circuitry of the type having at least one base layer formed with first and second opposing surfaces to provide a mechanical attachment to both sides a single through hole without electrical continuity, the invention comprising:

forming a first bore hole having a first bore diameter between the first surface and a desired first depth in the base layer between the first and second surfaces;

forming a first through passageway having a first passageway diameter extending through the base layer from the first surface to the second surface; the first through passageway being formed concentric with the first bore hole; the first bore diameter being greater than the first through passageway diameter;

forming a second bore hole having a second bore diameter concentric with the first through passageway

between the second surface and a desired second depth in the base layer between the first and second surfaces; the second bore diameter being greater than the first passageway diameter;

the first through passageway, first bore hole, and second bore hole comprising a desired open structure communicating between the first surface and the opposing second surface;

plating the open structure with a desired conductive material; and,

forming a second through passageway concentric with the first through passageway extending through the open structure in the base layer from the first surface to the second surface; the second through passageway having a second passageway diameter at least as large as the first passageway diameter; the second through passageway being formed after the open structure is electroplated.

[c14] The method of claim 13 further including the step of inserting a first connector pin compatible with at least a first portion of the open structure into the open structure from the first surface; inserting a second connector pin compatible with at least a second portion of the open structure into the open structure from the second surface.

[c15] The method of claim 13 wherein the printed circuit board includes multiple layers.

[c16] The method of claim 13 wherein the holes formed in the printed circuit board form cylindrical voids.

[c17] The method of claim 13 wherein a layer of electroless metal is deposited onto walls of the open structure; and, a further comparable metallic layer is electroplated over the electroless metal deposition.

[c18] The method of claim 17 wherein the metal is copper.